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## **SECTION 02100**

### **CLEARING**

#### **PART 1 - PRODUCTS**

**NONE IN THIS SECTION.**

#### **PART 2 - EXECUTION**

##### **2.01      CLEARING:**

- A. Clearing shall consist of the felling, and cutting of trees into sections, and the satisfactory disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, fences, rubbish and other objectionable material occurring within the area of construction, except such trees and vegetation as may be indicated or directed to be left standing. Only those trees, shrubs, lawns, sidewalks, fences, etc. that fall within the limits of construction or that interfere with proper construction practices shall be removed. Trees designated to be left standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter. Limbs and branches to be pruned shall be cut to Natural Target Pruning standards by a certified arborist. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations, by the erection of timber 4' high chain link fencing barriers. Such barriers must be placed and be approved by the Owner before construction operations can proceed. Clearing shall also include the removal and disposal of structures that obtrude, encroach upon, or otherwise obstruct the work. Clearing operations shall be conducted so as to prevent damage by falling trees to trees left standing, to existing structures and installation, and to those under construction, and so as to provide for the safety of employees and others.

##### **2.02      TREE REMOVAL:**

- A. Where indicated or directed, trees and stumps shall be removed from areas outside those areas designated for clearing and grubbing. This work shall include the felling of such trees and the removal of their stumps and roots. Trees shall be disposed of as hereinafter specified.

##### **2.03      DISPOSAL:**

- A. Disposal of trees, branches, snags, brush, stumps, etc., resulting from the clearing and grubbing shall be the responsibility of the Contractor and shall be disposed of

by removal from the site of this work. All costs in connection with disposing of the material will be at the Contractor's expense. All liability of any nature resulting from the disposal of the cleared and grubbed material shall become the responsibility of the Contractor. The disposal of all materials cleared and grubbed will be in accordance with the rules and regulations of the local, State, and Federal authorities.

## **2.04 GRUBBING:**

- A. Grubbing shall consist of the removal and disposal of stumps, roots larger than ½ inch in diameter, and matted roots from the designated grubbing areas. This material, together with logs and other organic or metallic debris not suitable for foundation and subgrade purposes, shall be excavated and removed to a depth of not less than 18-inches below the original surface level of the ground in embankment areas and not less than 2-feet below the finished earth surface in excavated areas. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

## **2.05 EXISTING TREE PROTECTION:**

### **A. SITE DEVELOPMENT PROJECTS:**

The following requirements pertain primarily to site development projects such as Community Centers, Fire Stations, and other projects that require Tree Quality Points:

1. Tree Protection Zones shall be established and maintained on a site for all trees which are to be awarded Tree Quality Points. A Tree Protection Zone shall be defined as one foot lateral radius per inch diameter breast height (dbh) surrounded by a 4' high chain link fence. All tree protection shall be done in compliance with Section VII-A of the City of Savannah's Land Clearing and Tree Protection Ordinance. Tree Protection shall be installed and inspected by the City's Ordinance Administrator prior to issuance of a Land Clearing permit. Where pervious paving is allowed inside the Tree Protection Zone, it shall comply with ASTM Standards for testing and acceptance. Water compaction and hand rolling with a one ton maximum roller only shall be permitted in the installation of pervious paving within Tree Protection Zones. No vibratory equipment shall be used to finish paving. No crusher run or other impervious materials shall be used in the subbase. The Ordinance Administrator shall be notified 24 hours prior to a pour or installation. See Section 02600, Part 3 for "Pervious Concrete Specifications."

2. The required minimum number of Tree Quality Points shall be maintained on site at all times. Any loss of Tree Quality Points that drop the site below its required minimum shall be replaced in accordance with Section VII-C of the Land Clearing and Tree Protection Ordinance. All planting shall be done in accordance with ANSI A300-1995 Standards.
3. No trenching, root raking, grading, driving or parking, storage or disposal of construction materials shall occur within any Tree Protection Zone at any time during clearing or construction of the project.
4. Trenching is not allowed within Tree Protection Zones. Tunneling shall replace trenching in all Tree Protection Zones. Tunneling shall be performed at the minimum depth of 24" below existing grade.

B. PROJECTS WITHIN CITY RIGHT-OF-WAYS

1. The following requirements pertain to Street Paving, Sidewalks, Water and Sewer, and Drainage Projects:

Tree Protection Zones for all Street Paving, Sidewalk Construction, Water and Sewer, and Drainage Improvement Projects shall be established and maintained in compliance with Section VII of the Tree Protection Ordinance to all reasonable extents possible. All demolition, excavation, and construction within Tree Protection Zones shall be performed by hand or with light equipment whenever possible. Clean cuts to roots shall be made at all times. Wound dressing is not recommended.

All cuts and pruning shall be done according to ANSI A300-1995 standards. All debris shall be pulled away from trunks during demolition to minimize root damage and compaction. All excavation shall be filled to original levels and tamped to original firmness. Contractor shall notify Park and Tree Department immediately if any roots 3/4" diameter or larger are damaged so that an inspection can be made to determine impact and whether the root(s) should be cut or the design modified. For street paving projects where tree replacement is required, the minimum replacement shall be one canopy tree per 40 linear feet of frontage. All planting shall be done in accordance with ANSI A300-1995 Standards.

2. Violations, Remedies and Penalties for Projects in which Tree Quality Points are Applicable

Encroachment into a Tree Protection Zone that results in 50% or greater loss of root system, cambium, limbs, or a combination of the above shall result in 100% loss of Tree Quality Points for the tree. Loss of less than 50% shall result in a proportional reduction of Tree Quality Points, subject to the judgment of the Administrator. If

the Administrator determines that tree protection has failed to the extent that a tree meets removal criteria, the Park and Tree Department shall remove the tree, if on City property, and the contractor shall replace the Tree Quality Points (TQP) lost in accordance with Section VII of the Ordinance. The Contractor shall also reimburse the Owner for removal costs.

**2.06 REMOVE AND REPLACE FENCE:**

- A. Where existing fences must be removed, the materials shall be removed neatly and stored carefully. Reinstallation of the fence shall match the line and height of the existing fence, except as directed by the Engineer, when fences are to be replaced. The existing materials may be used, provided they are not damaged. Any damaged materials shall be replaced with new material equal to and matching in appearance the existing material. Fences that are required for security of private or public property shall be reinstalled before the end of the workday in which they were removed.

**2.07 REMOVE AND REPLACE MAILBOXES:**

- A. Where existing mailboxes must be removed, they shall be removed neatly and stored carefully or installed in a temporary location as directed by the Engineer. Reinstallation of the mailboxes shall match their previous location and height. The existing materials shall be used, provided they are not damaged. Any damaged materials shall be replaced with new material equal to and matching in appearance the existing material.

**2.08 REMOVE AND REPLACE SHRUBS AND GROUNDCOVERS:**

- A. Shrubs and groundcovers that are to be retained shall be preserved and protected. Items that must be disturbed or relocated shall be carefully removed so as to prevent damage to the root systems, stored, and replanted as soon as possible after construction in the area is completed. Heeling in, mulching and regular watering are minimum preservation treatments.

**2.09 REMOVE AND REPLACE SIGNS:**

- A. Where existing signs must be removed, they shall be removed neatly and stored carefully or installed in a temporary location as directed by the Engineer. Reinstallation of the signs shall match their previous location and height. The existing materials shall be used, provided they are not damaged. Any damaged materials shall be replaced with new material equal to and matching in appearance the existing material.

End of Section